



## Estimates of the Seasonal Population of the Greater Topsail Island Area

The Topsail Chamber of Commerce requested estimates of the summer population of the Greater Topsail to quantify their seasonal population growth. The Greater Topsail area includes three incorporated areas—North Topsail Beach, Surf City, and Topsail Beach—as well as Sneads Ferry, a Census Designated Place (CDP). Topsail Beach and the majority of Surf City are located in Pender County. Sneads Ferry and North Topsail Beach are located in Onslow County.

### Components of Local Population

There are two major components of the local resident population:

- 1) **Permanent Population:** Individuals who are permanent residents of the Greater Topsail area
- 2) **Seasonal Population:** Individuals who are vacationing in the Greater Topsail area. This includes:
  - a. Individuals staying in rental property, such as beach houses or condominiums.
  - b. Individuals staying in hotels, motels, or bed and breakfast establishments.
  - c. Individuals camping at campgrounds or at RV parks.
  - d. Individuals staying with family or friends.

### Estimate of the Greater Topsail Summer Population

The Greater Topsail summer population = Permanent Population + Vacation Home Renters + Hotel/Motel/B&B Guests + Campers/RVs + Guests of Permanent Population

$$= 5,988 + 49,193 + 903 + 3,772 + 1,497$$

$$= \mathbf{61,353 \text{ people}}$$

## Methodology

### Greater Topsail Permanent Population

The Greater Topsail area's permanent population was estimated to be 5,988 individuals as of July 1, 2013. This is an increase of 378 persons from the 2010 census.

#### July 1, 2013 Population Estimates for Greater Topsail Area

Town	Resident Population
North Topsail Beach Town	736
Sneads Ferry CDP	2,775
Surf City Town	2,081
Topsail Beach Town	396
<b>Total</b>	<b>5,988</b>

Population estimates for North Topsail Beach, Surf City, and Topsail Beach were obtained from the U.S. Census Bureau's Population Estimates program. The 2013 population for Sneads Ferry was calculated through linear extrapolation of 2000-2010 population change.<sup>i</sup>

### Greater Topsail Seasonal Population

Each component of the seasonal population was estimated separately.

#### *Estimate of the Greater Topsail Seasonal Population in Rental Properties*

Estimating the seasonal population in rental properties has multiple steps:

1) Estimate Number of Available Rental Properties:

First, we estimated the total number of housing units in 2014. This was calculated by adding the number of units for which building permits were issued between 2010 and 2013 to the 2010 census count of housing for each area.<sup>ii</sup>

Next, we applied town-specific occupancy rates to determine how many of these housing units would be occupied by permanent residents. In addition, each town had its own rate for the share of vacant stock that was for rent or seasonal use. This was applied to the vacant housing stock to obtain an estimate of the housing stock available for seasonal use.<sup>iii</sup>

As of 2014, there were an estimated 5,972 total units available for seasonal use in the Greater Topsail Area.

**Estimated Housing Units in Greater Topsail Area and Availability for Rental**

Town	2014 Housing Units		
	Occupied by Permanent Residents	For Seasonal Use	Vacant
North Topsail Beach Town	412	2,152	59
Sneads Ferry CDP	1,213	300	102
Surf City Town	922	2,413	257
Topsail Beach Town	191	1,107	29
<b>Total (sum of towns)</b>	<b>2,738</b>	<b>5,972</b>	<b>446</b>

2) Calculate Type of Housing Available<sup>iv</sup>

The capacity of rental properties varies significantly depending on whether they are beach houses, duplexes/townhomes, condominiums, or other property types.

Additionally, the type of properties available varies substantially across the four areas of the Greater Topsail Region.

**Estimated Seasonal Housing by Type**

	North Topsail Beach Town	Sneads Ferry CDP	Surf City Town	Topsail Beach Town
<b>Total Seasonal Units</b>	2,152	300	2,413	1,107
<b>Distribution of Housing Type</b>				
Beach Houses	29%	68%	58%	86%
Duplexes and Townhomes	18%	0%	10%	7%
Condos	49%	7%	11%	6%
Mobile Homes	4%	24%	21%	1%
<b>Number of Units by Type</b>				
Beach Houses	634	205	1,393	949
Duplexes and Townhomes	377	0	235	76
Condos	1,053	22	268	69
Mobile Homes	88	73	517	13

3) Calculate Capacity of Rentals by Type<sup>v</sup>

The number of individuals that can occupy rentals varies both by unit type and by location. In the absence of specific parcel data, we used the data available on [www.rentabeach.com](http://www.rentabeach.com) to produce estimates of average max occupancy for each rental type by area.

**Average Max Occupancy by Rental Type and Location**

	North Topsail Beach Town	Sneads Ferry CDP	Surf City Town	Topsail Beach Town
Beach Houses	13.3	10.1	10.1	8.2
Duplexes and Townhomes	9.5	8.9	8.9	7.0
Condos	6.4	6.3	6.3	5.7
Mobile Homes	2.4	2.0	2.4	2.3

4) Produce Estimate of Peak Seasonal Population in Rental Units

The number of individuals who could occupy the Greater Topsail Area = (Total Number of Available Units) x (Average Number of People per Unit). By calculating this for each unit type and each area, we can obtain an estimate of the seasonal population that occupies rental units for each town and for the Greater Topsail Region as a whole.

In total, the Greater Topsail region’s rental units can house **49,193 visitors**.

**Estimated Seasonal Population by Unit Type and Area**

	North Topsail Beach Town	Sneads Ferry CDP	Surf City Town	Topsail Beach Town	TOTAL Greater Topsail Area
Beach Houses	8,434	2,076	14,102	7,801	32,414
Duplexes and Townhomes	3,592	0	2,088	537	6,217
Condos	6,737	137	1,673	393	8,941
Mobile Homes	215	148	1,229	30	1,621
<b>Total Seasonal Population</b>	<b>18,978</b>	<b>2,361</b>	<b>19,092</b>	<b>8,761</b>	<b>49,193</b>

***Estimate of the Greater Topsail Seasonal Population in Hotels/Motels/Bed & Breakfasts***

Information on the number of rooms at each of the 6 hotels and motels in the Greater Topsail region was provided. In the absence of maximum occupancy statistics, it was assumed that an

average of 3 individuals were staying in each room, an estimate consistent with an evaluation of the total occupants in each hotel/motel over the course of the summer.

In total, the hotels/motels of the Greater Topsail region can house **930 visitors**.

**Estimate of Seasonal Population in Hotels/Motels**

Hotel/Motel	Rooms	Estimated Capacity
Breezeway Motel	94	282
Holiday Inn Express	68	204
Sea Scape Motel	9	27
Tiffany's Motel	48	144
Jolly Roger Inn	40	120
Island Inn	42	126
<b>Total Seasonal Population</b>	<b>301</b>	<b>903</b>

*Estimate of the Greater Topsail Seasonal Population in Campgrounds/RV Parks*

There are four campgrounds in the Greater Topsail region. According to the owners of these sites, they average 4 persons per campsite. In total, the Greater Topsail region campsites can house **3,772 visitors**.

**Estimate of Seasonal Population at Campgrounds**

Campground	Campsites	Estimated Capacity
Blackbeard's Treasure Campground	68	272
Lanier's Campground	500	2,000
Topsail Sound RV Park	225	900
Virginia Creek Campground	150	600
<b>Total Seasonal Population</b>	<b>943</b>	<b>3,772</b>

*Estimate of the Greater Topsail Seasonal Population as Guests of Permanent Residents*

Research from NC Commerce on tourism to North Carolina suggests that many individuals stay with family or friends on overnight visits,<sup>vi</sup> but the true volume of individuals who are staying with permanent residents in the Greater Topsail region is difficult to calculate. In its 2009 Land Use Plan, Dare County<sup>vii</sup> estimated that the seasonal population of visiting family and friends of permanent residents was equivalent to 25% of the permanent resident population.

Applying this same increase to the Greater Topsail area yields  $(0.25 \times 5,988)$  or **1,497 individuals staying with family or friends.**

<sup>i</sup> Population estimates for North Topsail Beach Town, Surf City Town, and Topsail Beach Town were obtained from: U.S. Census Bureau. 2014. Incorporated Places and Minor Civil Divisions Datasets: Subcounty Resident Population Estimates: April 1, 2010 to July 1, 2013. Retrieved from <http://www.census.gov/popest/data/cities/totals/2013/SUB-EST2013.html>.

Sneads Ferry CDP July 1, 2013 population was estimated by Carolina Demography using linear extrapolation. First, we calculated the average annual numeric change in Sneads Ferry CDP population between the 2000 and 2010 census:

$$AANC_{2000-2010} = \frac{Pop_{2010} - Pop_{2000}}{10} = \frac{2,646 - 2,248}{10} = \frac{398}{10} = 39.8$$

Next, we multiplied the average annual numeric change by 3.25 to estimate the population growth that occurred during the three year, three month time period between April 1, 2010, and July 1, 2013. This number (129) was added to the Sneads Ferry population in 2010 (2,646) to obtain the July 1, 2013 population estimate for Sneads Ferry: 2,775.

<sup>ii</sup> The assumption is a six month lag between permitting and entry into available housing stock. Building permits for North Topsail Beach, Surf City, and Topsail Beach were obtained from the U.S. Census Bureau’s Building Permit Survey (<http://www.census.gov/construction/bps/>).

Sneads Ferry CDP Building Permits for 2010-2013 were estimated by Carolina Demography. First, we calculated the change in housing units for each area between 2000 and 2010. Next, we calculated the average annual change in housing units (change over the decade divided by 10) and multiplied by four to obtain the expected number of new housing units (measured as building permits) between 2010 and 2013. Third, we examined the relationship between the predicted value of new housing and the actual number of building permits recorded for the three areas for which building permit data were available: North Topsail Beach Town, Surf City Town, and Topsail Beach Town. (Given the economic recession, it was expected that the 2000-2010 numbers alone might yield an overestimate). The estimate was nearly identical to observed building permit data in Surf City (280 permits were issued compared to an estimate of 294 units), but significantly overestimated housing activity in North Topsail Beach City and Topsail Beach. To calculate a yield ratio, we summed the actual building permits issued in these three municipalities and divided by the sum of the predicted housing units for these three municipalities. This yield factor (71.6%) was applied to the estimated housing (88) for Sneads Ferry to yield an estimate of 63 new housing units in Sneads Ferry CDP between 2010 and 2013.

Town	Housing Units		
	2010	Permits Issued, 2010-2013	2014 Housing
North Topsail Beach Town	2,547	76	2,623
Sneads Ferry CDP	1,552	63	1,615
Surf City Town	3,312	280	3,592
Topsail Beach Town	1,298	29	1,327
<b>Total (sum of towns)</b>	<b>8,709</b>	<b>448</b>	<b>9,157</b>

<sup>iii</sup> Occupancy and vacancy rates were calculated from the 2010 census using Table H3: Occupancy Status. The share of housing vacant for seasonal or rental use was calculated from the 2010 census using Table H5: Vacancy Status. All data were retrieved from Social Explorer.

Town	Occupancy		Reason Vacant		
	Occupancy Rate	Vacancy Rate	For Rent	Seasonal Use	Total for Rent or Seasonal Use
North Topsail Beach Town	16%	84%	4%	93%	97%
Sneads Ferry CDP	75%	25%	5%	69%	75%
Surf City Town	26%	74%	8%	82%	90%
Topsail Beach Town	14%	86%	17%	80%	97%

<sup>iv</sup> Distribution of vacant units by type was calculated using the following tables from the 2008-2012 American Community Survey. Both tables were retrieved from Social Explorer:

B25024: Units in Structure

B25032: Tenure By Units In Structure

""Beach Houses"" refer to single family, detached homes. ""Duplexes and Townhomes"" are either single family, attached homes or structures with 2 units in them. ""Condos"" refer to structures with 3 or more units in them.

<sup>v</sup> Average occupancy for beach houses, duplexes and townhomes, and condominiums for rent was calculated by using data available on properties for rent on [www.RentABeach.com](http://www.RentABeach.com). Calculations were made separately for each city and property type.

Sufficient data for Sneads Ferry CDP was not available on [RentABeach.com](http://www.RentABeach.com). Estimates from Surf City were substituted for the purposes of this analysis.

Average persons per mobile home were based on average persons per occupied mobile home data in the 2008-2012 American Community Survey. These values were calculated by Carolina Demography using Table B25124: Tenure By Household Size By Units In Structure. Data were retrieved from Social Explorer.

Topsail Beach Town did not have sufficient data for mobile homes in the 2008-2012 ACS to calculate average persons per unit. We estimated Topsail Beach Town's mobile home PPU as the average of North Topsail Beach Town, Sneads Ferry CDP, and Surf City Town.

<sup>vi</sup> NC Department of Commerce. 2014. "2013 North Carolina Visitor Profile." Retrieved from <http://www.nccommerce.com/tourism/research/visitation-research/visitor-profile-reports>.

<sup>vii</sup> Dare County Board of Commissioners. 2010. "2009 Dare County Land Use Plan Update." Retrieved from <http://www.darenc.com/Forms/LUSE/LUP.pdf>.